

CLAIMS

What is claimed is:

1. A method of inhibiting the interaction of a cell bearing mammalian CC-chemokine receptor 1 (CCR1) with a ligand thereof, comprising contacting said
5 cell with an effective amount of an antibody or antigen-binding fragment thereof which binds to mammalian CC-chemokine receptor 1 (CCR1) or portion of said receptor and inhibits binding of said ligand to the receptor, wherein said antibody or antigen-binding fragment thereof binds the second extracellular loop of said receptor.
- 10 2. A method according to Claim 1, wherein the cell is selected from the group consisting of lymphocytes, monocytes, granulocytes, neutrophils, T cells, basophils, and cells comprising a recombinant nucleic acid encoding CCR1 or a portion thereof.
- 15 3. A method according to Claim 2, wherein the cell is a T cell selected from the group consisting of CD26⁺ cells and CD45RO⁺ cells.
4. A method according to Claim 1, wherein said antibody or antigen-binding fragment thereof inhibits one or more functions associated with binding of the ligand to said receptor.
- 20 5. A method according to Claim 1, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.
6. A method according to Claim 1, wherein the ligand is a chemokine.

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7. A method according to Claim 6, wherein the chemokine is any one or more of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 or MPIF.
8. A method according to Claim 1, wherein the antibody or antigen-binding fragment thereof is selected from the group consisting of:
- 5 a) monoclonal antibody 2D4;
- b) antigen-binding fragments of (a) which bind to mammalian CC- chemokine receptor 1 (CCR1) or a portion thereof; and
- c) combinations of the foregoing.
9. A method according to Claim 1, wherein said antibody or antigen-binding
10 fragment is a monoclonal antibody or fragment thereof.
10. A method according to Claim 1, wherein said antibody or antigen-binding fragment is a chimeric antibody or fragment thereof.
11. A method according to Claim 1, wherein said antibody or antigen-binding fragment is a human antibody or fragment thereof.
12. A method according to Claim 1, wherein said antibody or antigen-binding
15 fragment is a humanized antibody or fragment thereof.
13. A method according to Claim 12, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.
14. A method according to Claim 12, wherein said humanized antibody or fragment
20 thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.

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15. A method according to Claim 14, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
- 5 16. A method according to Claim 1, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
17. A method according to Claim 16, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
- 10 18. A method according to Claim 17, wherein said recombinant antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
19. A method according to Claim 1, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an F(ab')₂ fragment.
- 15 20. A method of inhibiting the interaction of a cell bearing mammalian CC-chemokine receptor 1 (CCR1) with a ligand thereof, comprising contacting said cell with an effective amount of an antibody or antigen-binding fragment thereof which binds to mammalian CC-chemokine receptor 1 (CCR1) or portion of said receptor and inhibits binding of said ligand to the receptor, wherein said
- 20 antibody or antigen-binding fragment thereof can compete with monoclonal antibody 2D4 for binding to said receptor.
21. A method according to Claim 20, wherein said antibody or antigen-binding fragment thereof inhibits one or more functions associated with binding of the ligand to said receptor.

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22. A method according to Claim 20, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.
23. A method according to Claim 20, wherein the ligand is a chemokine.
24. A method according to Claim 23, wherein the chemokine is selected from the group consisting of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 and MPIF.
25. A method according to Claim 20, wherein said antibody or fragment is a monoclonal antibody or fragment thereof.
26. A method according to Claim 20, wherein said antibody or fragment is a chimeric antibody or fragment thereof.
27. A method according to Claim 20, wherein said antibody or fragment is a human antibody or fragment thereof.
28. A method according to Claim 20, wherein said antibody or fragment is a humanized antibody or fragment thereof.
29. A method according to Claim 28, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.
30. A method according to Claim 28, wherein said humanized antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.

31. A method according to Claim 30, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
- 5 32. A method according to Claim 20, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
33. A method according to Claim 32, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
- 10 34. A method according to Claim 33, wherein said recombinant antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
35. A method according to Claim 20, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an F(ab')₂ fragment.
- 15 36. A method of inhibiting a function associated with binding of a chemokine to a mammalian CC-chemokine receptor 1 (CCR1) or a functional portion of said receptor, comprising contacting a composition comprising the receptor or functional portion thereof with an effective amount of an antibody or antigen-binding fragment thereof which binds to a mammalian CC-chemokine receptor 1 (CCR1) or portion of said receptor, wherein said antibody or fragment inhibits binding of said chemokine to mammalian CC-chemokine receptor 1 (CCR1) and inhibits one or more functions associated with binding of the chemokine to the receptor, and wherein said antibody or antigen-binding fragment thereof binds the second extracellular loop of said receptor.
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37. A method according to Claim 36, wherein the chemokine is any one or more of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 or MPIF.
38. A method according to Claim 36, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.
- 5 39. A method according to Claim 36, wherein the antibody or antigen-binding fragment is selected from the group consisting of:
- a) monoclonal antibody 2D4;
 - b) antigen-binding fragments of (a) which bind to mammalian CC-chemokine receptor 1 (CCR1) or a portion thereof; and
 - 10 c) combinations of the foregoing.
40. A method according to Claim 36, wherein said antibody or antigen-binding fragment is a monoclonal antibody or fragment thereof.
41. A method according to Claim 36, wherein said antibody or antigen-binding fragment is a chimeric antibody or fragment thereof.
- 15 42. A method according to Claim 36, wherein said antibody or antigen-binding fragment is a human antibody or fragment thereof.
43. A method according to Claim 36, wherein said antibody or antigen-binding fragment is a humanized antibody or fragment thereof.
- 20 44. A method according to Claim 43, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.

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45. A method according to Claim 43, wherein said humanized antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
46. A method according to Claim 45, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
47. A method according to Claim 36, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
48. A method according to Claim 47, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
49. A method according to Claim 48, wherein said recombinant antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
50. A method according to Claim 36, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an F(ab')₂ fragment.
51. A method of inhibiting a function associated with binding of a chemokine to a mammalian CC-chemokine receptor 1 (CCR1) or a functional portion of said receptor, comprising contacting a composition comprising the receptor or functional portion thereof with an effective amount of an antibody or antigen-binding fragment thereof which binds to a mammalian CC-chemokine receptor 1 (CCR1) or portion of said receptor, wherein said antibody or fragment inhibits binding of said chemokine to mammalian CC-chemokine receptor 1

(CCR1) and inhibits one or more functions associated with binding of the chemokine to the receptor, and wherein said antibody or antigen-binding fragment thereof can compete with monoclonal antibody 2D4 for binding to said receptor.

- 5 52. A method according to Claim 51, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.
53. A method according to Claim 51, wherein the chemokine is selected from the group consisting of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 and MPIF.
- 10 54. A method according to Claim 51, wherein said antibody or fragment is a monoclonal antibody or fragment thereof.
55. A method according to Claim 51, wherein said antibody or fragment is a chimeric antibody or fragment thereof.
- 15 56. A method according to Claim 51, wherein said antibody or fragment is a human antibody or fragment thereof.
57. A method according to Claim 51, wherein said antibody or fragment is a humanized antibody or fragment thereof.
58. A method according to Claim 57, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.
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59. A method according to Claim 57, wherein said humanized antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
60. A method according to Claim 59, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
61. A method according to Claim 51, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
62. A method according to Claim 61, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
63. A method according to Claim 62, wherein said recombinant antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
64. A method according to Claim 51, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an F(ab')₂ fragment.
65. A method of inhibiting leukocyte trafficking in a patient, comprising administering to the patient a composition comprising an effective amount of an antibody or antigen-binding fragment thereof which binds to a mammalian CC-chemokine receptor 1 (CCR1) or portion of said receptor and inhibits binding of a ligand to the receptor, wherein said antibody or antigen-binding fragment thereof binds the second extracellular loop of said receptor.

66. A method according to Claim 65, wherein said antibody or antigen-binding fragment thereof inhibits one or more functions associated with binding of the ligand to said receptor.
67. A method according to Claim 65, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.
68. A method according to Claim 65, wherein the ligand is a chemokine.
69. A method according to Claim 68, wherein the chemokine is any one or more of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 or MPIF.
70. A method according to Claim 65, wherein the antibody or antigen-binding fragment thereof is selected from the group consisting of:
- a) monoclonal antibody 2D4;
 - b) antigen-binding fragments of (a) which bind to mammalian CC-chemokine receptor 1 (CCR1) or a portion thereof; and
 - c) combinations of the foregoing.
71. A method according to Claim 65, wherein said antibody or antigen-binding fragment is a monoclonal antibody or fragment thereof.
72. A method according to Claim 65, wherein said antibody or antigen-binding fragment is a chimeric antibody or fragment thereof.
73. A method according to Claim 65, wherein said antibody or antigen-binding fragment is a human antibody or fragment thereof.
74. A method according to Claim 65, wherein said antibody or antigen-binding fragment is a humanized antibody or fragment thereof.

75. A method according to Claim 74, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.
76. A method according to Claim 74, wherein said humanized antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
77. A method according to Claim 76, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
78. A method according to Claim 65, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
79. A method according to Claim 78, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
80. A method according to Claim 79, wherein said recombinant antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
81. A method according to Claim 65, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an F(ab')₂ fragment.
82. A method of inhibiting leukocyte trafficking in a patient, comprising administering to the patient a composition comprising an effective amount of an

antibody or antigen-binding fragment thereof which binds to a mammalian CC-chemokine receptor 1 (CCR1) or portion of said receptor and inhibits binding of a ligand to the receptor, wherein said antibody or antigen-binding fragment thereof can compete with monoclonal antibody 2D4 for binding to said receptor.

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83. A method according to Claim 82, wherein said antibody or antigen-binding fragment thereof inhibits one or more functions associated with binding of the ligand to said receptor.

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84. A method according to Claim 82, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.

85. A method according to Claim 82, wherein the ligand is a chemokine.

86. A method according to Claim 85, wherein the chemokine is selected from the group consisting of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 and MPIF.

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87. A method according to Claim 82, wherein said antibody or fragment is a monoclonal antibody or fragment thereof.

88. A method according to Claim 82, wherein said antibody or fragment is a chimeric antibody or fragment thereof.

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89. A method according to Claim 82, wherein said antibody or fragment is a human antibody or fragment thereof.

90. A method according to Claim 82, wherein said antibody or fragment is a humanized antibody or fragment thereof.

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91. A method according to Claim 90, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.
92. A method according to Claim 90, wherein said humanized antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
93. A method according to Claim 92, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
94. A method according to Claim 82, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
95. A method according to Claim 94, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
96. A method according to Claim 95, wherein said recombinant antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
97. A method according to Claim 82, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an F(ab')₂ fragment.
98. A method of treating a CC-chemokine receptor 1 (CCR1)-mediated disorder in a patient, comprising administering to the patient an effective amount of an

antibody or antigen-binding fragment thereof which binds to mammalian CC-chemokine receptor 1 (CCR1) or portion thereof and inhibits binding of a ligand to the receptor, wherein said antibody or antigen-binding fragment thereof binds the second extracellular loop of said receptor.

- 5 99. A method according to Claim 98, wherein said antibody or antigen-binding fragment thereof inhibits one or more functions associated with binding of the ligand to said receptor.
100. A method according to Claim 98, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.
- 10 101. A method according to Claim 98, wherein the ligand is a chemokine.
102. A method according to Claim 101, wherein the chemokine is any one or more of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 or MPIF.
103. A method according to Claim 98, wherein the antibody or antigen-binding fragment thereof is selected from the group consisting of:
- 15 a) monoclonal antibody 2D4;
- b) antigen-binding fragments of (a) which bind to mammalian CC-chemokine receptor 1 (CCR1) or a portion thereof; and
- c) combinations of the foregoing.
104. A method according to Claim 98, wherein said antibody or antigen-binding fragment is a monoclonal antibody or fragment thereof.
- 20 105. A method according to Claim 98, wherein said antibody or antigen-binding fragment is a chimeric antibody or fragment thereof.

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106. A method according to Claim 98, wherein said antibody or antigen-binding fragment is a human antibody or fragment thereof.
107. A method according to Claim 98, wherein said antibody or antigen-binding fragment is a humanized antibody or fragment thereof.
- 5 108. A method according to Claim 107, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.
- 10 109. A method according to Claim 107, wherein said humanized antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
110. A method according to Claim 109, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
- 15 111. A method according to Claim 98, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
112. A method according to Claim 111, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
- 20 113. A method according to Claim 112, wherein said recombinant antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.

TOP SECRET 096047-0310

114. A method according to Claim 98, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an F(ab')₂ fragment.
- 5 115. A method of treating a CC-chemokine receptor 1 (CCR1)-mediated disorder in a patient, comprising administering to the patient an effective amount of an antibody or antigen-binding fragment thereof which binds to mammalian CC-chemokine receptor 1 (CCR1) or portion thereof and inhibits binding of a ligand to the receptor, wherein said antibody or antigen-binding fragment thereof can compete with monoclonal antibody 2D4 for binding to said receptor.
- 10 116. A method according to Claim 115, wherein said antibody or antigen-binding fragment thereof inhibits one or more functions associated with binding of the ligand to said receptor.
117. A method according to Claim 115, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.
- 15 118. A method according to Claim 115, wherein the ligand is a chemokine.
119. A method according to Claim 118, wherein the chemokine is selected from the group consisting of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 and MPIF.
- 20 120. A method according to Claim 115, wherein said antibody or fragment is a monoclonal antibody or fragment thereof.
121. A method according to Claim 115, wherein said antibody or fragment is a chimeric antibody or fragment thereof.

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122. A method according to Claim 115, wherein said antibody or fragment is a human antibody or fragment thereof.
123. A method according to Claim 115, wherein said antibody or fragment is a humanized antibody or fragment thereof.
- 5 124. A method according to Claim 123, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.
125. A method according to Claim 123, wherein said humanized antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
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126. A method according to Claim 125, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
127. A method according to Claim 115, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
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128. A method according to Claim 127, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
129. A method according to Claim 128, wherein said recombinant antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
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130. A method according to Claim 115, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an F(ab')₂ fragment.
- 5 131. A method of treating an inflammatory disorder in a patient, comprising administering to the patient an effective amount of an antibody or antigen-binding fragment thereof which binds to mammalian CC-chemokine receptor 1 (CCR1) or portion thereof and inhibits binding of a ligand to the receptor, wherein said antibody or antigen-binding fragment thereof binds the second extracellular loop of said receptor.
- 10 132. A method according to Claim 131, wherein said antibody or antigen-binding fragment thereof inhibits one or more functions associated with binding of the ligand to said receptor.
133. A method according to Claim 131, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.
- 15 134. A method according to Claim 131, wherein the ligand is a chemokine.
135. A method according to Claim 134, wherein the chemokine is any one or more of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 or MPIF.
136. A method according to Claim 131, wherein the antibody or antigen-binding fragment thereof is selected from the group consisting of:
- 20 a) monoclonal antibody 2D4;
- b) antigen-binding fragments of (a) which bind to mammalian CC-chemokine receptor 1 (CCR1) or a portion thereof; and
- c) combinations of the foregoing.

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137. A method according to Claim 131, wherein said antibody or antigen-binding fragment is a monoclonal antibody or fragment thereof.
138. A method according to Claim 131, wherein said antibody or antigen-binding fragment is a chimeric antibody or fragment thereof.
- 5 139. A method according to Claim 131, wherein said antibody or antigen-binding fragment is a human antibody or fragment thereof.
140. A method according to Claim 131, wherein said antibody or antigen-binding fragment is a humanized antibody or fragment thereof.
- 10 141. A method according to Claim 140, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.
142. A method according to Claim 140, wherein said humanized antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
- 15 143. A method according to Claim 142, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
144. A method according to Claim 131, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
- 20 145. A method according to Claim 144, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.

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146. A method according to Claim 145, wherein said recombinant antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
- 5 147. A method according to Claim 131, wherein said antigen-binding fragment is selected from the group consisting of an Fv fragment, an Fab fragment, an Fab' fragment and an F(ab')₂ fragment.
- 10 148. A method of treating an inflammatory disorder in a patient, comprising administering to the patient an effective amount of an antibody or antigen-binding fragment thereof which binds to mammalian CC-chemokine receptor 1 (CCR1) or portion thereof and inhibits binding of a ligand to the receptor, wherein said antibody or antigen-binding fragment thereof can compete with monoclonal antibody 2D4 for binding to said receptor.
- 15 149. A method according to Claim 148, wherein said antibody or antigen-binding fragment thereof inhibits one or more functions associated with binding of the ligand to said receptor.
150. A method according to Claim 148, wherein said mammalian CC-chemokine receptor 1 is a human CC-chemokine receptor 1.
151. A method according to Claim 148, wherein the ligand is a chemokine.
- 20 152. A method according to Claim 151, wherein the chemokine is selected from the group consisting of MIP-1 α , RANTES, MCP-2, MCP-3, leukotactin-1, HCC-1 and MPIF.

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153. A method according to Claim 148, wherein said antibody or fragment is a monoclonal antibody or fragment thereof.
154. A method according to Claim 148, wherein said antibody or fragment is a chimeric antibody or fragment thereof.
- 5 155. A method according to Claim 148, wherein said antibody or fragment is a human antibody or fragment thereof.
156. A method according to Claim 148, wherein said antibody or fragment is a humanized antibody or fragment thereof.
- 10 157. A method according to Claim 156, wherein said humanized antibody or fragment thereof comprises one or more antigen-binding regions of monoclonal antibody 2D4.
158. A method according to Claim 156, wherein said humanized antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.
- 15 159. A method according to Claim 158, wherein said humanized antibody or fragment thereof comprises six complementarity-determining regions of monoclonal antibody 2D4.
160. A method according to Claim 148, wherein said antibody or antigen-binding fragment is a recombinant antibody or antigen-binding fragment thereof.
- 20 161. A method according to Claim 160, wherein said recombinant antibody or fragment thereof comprises one or more complementarity-determining regions of monoclonal antibody 2D4.

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